
Economic and Consumption Distribution and Business Strategy Toward Improvement of Agricultural Industry

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Abstract:

The agriculture industry is an industry with raw materials from the agricultural and agro-industrial sector. It is not only activities of processing agricultural products into value-added processed commodities but also includes the changes in value systems and cultural economic development with a more comprehensive policy strategy.

The research aims to analyze and assess the effect of the consumption distribution and business strategy partially and simultaneously on the improvement of the agriculture industry. The method used in this research is quantitative descriptive research. Samples of this study are the agriculture industry companies listed on the Indonesian Stock Exchange (IDX). Data were analyzed using multiple linear regression analysis.

The result concluded that the effect of consumption distribution on agriculture industry is positive and significant; effect of business strategy partially on the agriculture industry is also positive and significant, and the effect of the consumption distribution and business strategy simultaneously on the agriculture industry is significant.

Keywords: Consumption Distribution, Business Strategy, Agricultural Industry

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1. Introduction

Agricultural industry or agro-industry is an industry with the raw materials basis from agricultural sector and other natural resource base. Agro-industry is not only the activity of processing agricultural products into higher value-added processed commodities, but also includes the changes in value systems and cultural economic development with a more comprehensive policy strategy.

Indonesia's agricultural industry has not experienced a significant improvement when viewed on the value of production in each sub-sector of the agricultural industry. The agricultural industry in Indonesia is dominated by food crops sub-sector with the highest production value amounted to 17.20 million rupiah followed by plantation sub-sector with the production value amounted to 17.00 million rupiah, while the lowest agricultural sub-sectors is the livestock with a production value amounted to 4.10 million rupiah. The detail can be seen in Table I as follows:

Table 1. *Production Value of Agricultural Industrial in Indonesia*

| No. | Agricultural Industry Sub-sector | amount (in million rupiah) |
|-----|----------------------------------|-------------------------------|
| 1. | Forestry | 8.80 |
| 2. | Fishery | 15,20 |
| 3. | Plantation | 17.00 |
| 4. | livestock | 4.10 |
| 5. | Crops | 17.20 |

Source: BPS (February 2016)

According to Arifin (2007), Indonesia used to give much attention on agro-industry to increase the added value of primary agricultural commodities, as well as efforts to reduce the inequality in growth between agriculture and industrial sectors. The industrialization of agriculture is considered as the most rational option to achieve a broad-based development strategy which is expected to accelerate the eradication of poverty and the creation of employment opportunities. Several policy measures have been undertaken, ranging from the improvement of productivity in the primary sector or farming and upstream agricultural cultivation, system development and agribusiness in general, vertical integration with the secondary and tertiary sectors in the processing field, financial support by banks and non-bank institutions, macroeconomic stabilization in the form of controlling inflation rate and exchange rate, and so forth (Menshchikova and Sayapin, 2016; Filatova, 2016).

Consumption distribution within the agricultural industry today has a very important role considering the changes in public's consumption and distribution patterns in using the agricultural products. Consumption distribution can be influenced by several factors, including the type and intensity of people needs, the market price, quality and quantity of the product as well as infrastructure in the agricultural industry (Valma, 2014; Pociovalisteanu and Thalassinou, 2008).

Opportunities and huge potential of the agricultural industry should be well maximized, not only the farmers who need to develop but it must be supported by the government. Maximizing this potential requires a business strategy that is appropriate and effective which are (a) make agriculture as a comprehensive industry concept, (b) build excellences to compete, (c) make agriculture as the main sectors, (d) establish a system of agricultural through the seed industry, (e) make fertilizer industry, (f) run the repositioning of cooperatives in agriculture, (g) develop information systems, (h) creating a government banking support, (i) develop marketing strategies, (j) utilize technology and qualified human resource, (k) develop growth centers of agricultural sector, (l) develop agricultural infrastructures, (m) implement integrated policy in development. Thus, the consumption distribution and business strategies must be considered in order to improve the agricultural industry (Tyaglov *et al.*, 2017).

Based on the description above, the formulation of the problem in this research are:

- a. Is there any influence of the consumption distribution partially on the improvement of agricultural industry?
- b. Is there any influence of the business strategy partially on the improvement of agricultural industry?
- c. Is there any influence of the consumption distribution and business strategies simultaneously on the improvement of agricultural industry?

The research objectives are:

- a. To analyze and assess the partial influence of the consumption distribution on the improvement of agricultural industry.
- b. To analyze and assess the partial influence of the business strategies on the improvement of agricultural industry.
- c. To analyze and assess the simultaneous influence of the consumption distribution and business strategies on the improvement of agricultural industry.

2. Literature and Hypotheses

2.1 Agriculture

Agriculture or farm according to Hanafie (2010) is a production process that is based on the growth of plants and animals. Agriculture is the primary industry which covers the organization of land, water and minerals resources as well as various forms of capital, management of labor to manufacture and market a wide range of goods needed by humans.

Putong (2013) says that the production or manufacture is an effort or activity to add utility (use value) of a product. The usefulness of an item will increase when it gives new benefits or more than its original shape. To produce, it requires factors of production, namely the means to carry out the production process. Production factors referred in economics is human (manpower = MP), capital (money or capital equipment such as machinery = M), natural resources (land = L), and skill

(technology = T). According to Mubyarto (2007), agriculture in the broad sense includes:

- a. Smallholder agriculture or referred as farming in the narrow meaning.
- b. Plantation (including smallholder plantations and big scale plantation).
- c. Forestry.
- d. Farms.
- e. Fishery (in fisheries further division known are inland fisheries and marine fisheries).

The characteristics of agriculture are as follows (Hanafie, 2010):

- a. All kinds of crops require nearly the same physical input.
- b. Agriculture must remain scattered.
- c. Aspects of natural resources in agriculture covering the sun, soil, water and air.
- d. Time to launch a farming operation must be adjusted with weather conditions and pest attack.
- e. The time factor in the growth of plants and animals to encourage diversity in agriculture.
- f. Very strong interaction between physical and non-physical factors.
- g. Most of businessmen and laborers must have broader skills than factory workers.
- h. Small sizes farm which economically weak and traditional exploitation.
- i. Effective two-way communication between the aspirations of farmers and bureaucratic information
- j. The harvest season and out of season causes the need for storage technologies.
- k. The production and consumption unit cannot be separated.
- l. Progressive agriculture is always changing.

2.2 Consumption Distribution

The size of consumption by Putong (2013: p. 348) are affected by:

- a. The level of income and wealth.
- b. The rate of interest and speculation.
- c. Frugality.
- d. Culture, lifestyle and demonstration effect.
- e. The state of the economy.

Consumption theory consists of (Putong, 2013):

- a. *Consumption Theory of Friedman's model*. The consumption theory of Milton Friedman, famously known as consumption theory of Permanent Income Hypothesis. In a more modest meaning, permanent income is a long-term income or average income. Thus, consumption based on permanent income is relatively fixed consumption that can be sustained throughout life.
- b. *Consumption theory of Modigliani Model*. Consumption theory of Modigliani, known as the Life Cycle Hypothesis, states that the consumption of a person beside from their earnings, also depends on the wealth. The wealth is obtained

from the allowance of income that is not consumed, that is savings and/or heritage.

- c. *Consumption theory of Keynes Model.* Consumption theory of Keynes model is famous as consumption theory with the Absolut Revenue Hypothesis. It is basically explaining that the consumption of a person or community is absolutely determined by income levels. Even if there are other factors that determine it, according to Keynes all this did not mean anything, and it does not specify it.

According to Sukirno, *et al.* (2006), One of the important functions of marketing is distribution which is to distribute goods from production sites to the various locations where the consumers are located. Formally according to Lamb, Hair and McDaniel (2001), a marketing channel (also called as channel of distribution) is a business structure of the organization which interdependent, reach from the starting point of a product to the customer, with the goal of moving products to the final consumption. Marketing channels, by Kotler and Keller (2007), are organizations that are interdependent included in the process of making products or services to be available for use or consumption.

In carrying out the distribution and marketing of goods, every company needs to determine the type of distribution channel that will be used (Sukirno, *et al.*, 2006), such as:

- a. *Producer-to-consumer direct channel.* This distribution channel is mainly used to market goods that are perishable or limited market which is located in a location such as a town, village or other small location.
- b. *Manufacturer-retailer-consumer channels.* This distribution channel is an alternative to the company that its market is limited in one location and a small company selling a relatively small amount for each location, although the wider market which includes one province or state.
- c. *Manufacturers-wholesalers-retailers-consumers channels.* These distribution channels are mainly used by large companies whose market spread all over the province and especially throughout the country.
- d. *Manufacturers-sales agents-consumers or producers-sales agents-retailers-consumers channels.* Sales agent is the company designated by producers to market their products and earn a commission based on the volume or value of goods they have sell.

2.3 Business strategy

Tunggal (2008) states business strategy provides the basic direction for action strategies. The business strategy is the basis for coordinated and sustained efforts, directed towards the achievement of long-term business objectives. Business strategy shows how the long-term goal is achieved. Thus, a business strategy can be defined as a general comprehensive approach that directs the key actions of a company.

The business strategy is divided into (Single, 2008):

- a. *Concentrated growth.* Concentrated growth is the company's strategy which directs its resources towards profitable growth from a single product, in a single market, with a single dominant technology.
- b. *Market development.* Market development is usually only on the second level of the most expensive and risky business strategies concentration. The development consists of advertising current products with just small modification to the customer within the market scope related to adding the distribution channel or changing the advertisement content or promotion. Market development allows the company to practice a form of growth concentration by identifying new uses for existing products or new markets defined by demographic, psychological or geographical.
- c. *Product development.* Product development includes substantial modification of existing products or the creation of a new but related product, which can be marketed to current customers through defined channels. Product development strategy is often adopted to prolong the current product life cycle, or to take advantages of a favorable reputation or brand name.
- d. *Innovation.* The rationale underlying the innovation is to create a life cycle of new product and to make the current same product becoming obsolete. This means, the strategy is different from product development strategy that extends the life cycle of existing products.
- e. *Horizontal integration.* If a company's long-term strategy is based on growth through acquisition from one or more of the same company which operates at the same stage of the production-marketing chain, this business strategy is called horizontal integration. This acquisition eliminates competitors and gives companies who buy (acquiring firm) the access to new markets.
- f. *Vertical integration.* If a company's business strategy is to acquire companies who offers inputs (such as raw materials) or customers for the output the strategy so-called vertical integration.
- g. *Joint ventures.* Sometimes two or more capable companies lacking in a necessary component of success in a particular competitive environment, then the solution is a joint venture. The joint venture provides new opportunities with risks that can be shared.
- h. *Concentric diversification.* Concentric diversification includes business acquisition of related companies that make acquisitions in the technology, market or product. The ideal concentric diversification occurs when the combined company's earnings increase strength and opportunities also reduce weaknesses or risk exposure.
- i. *Conglomerate diversification.* Diversified conglomerate is a corporate strategy, especially very large companies that plan to acquire a business because the business investment opportunities are highly prospective. Diversified conglomerate paid little attention to the creation of synergies products - a market with existing businesses,
- j. *Retrenchment/turnaround.* Retrenchment is a corporate strategy to survive and eventually rise if the company can build its distinctive competence. Because the

underlying intention of retrenchment strategy is to reverse the current negative trends; so, it is often called as turnaround strategy.

- k. *Divesture*. Divesture strategy includes the sale of a company or a major component of the company. Divesture often arise because of partial mismatches between the acquired company to the parent company. Another one is the corporate financial; which is the needs to improve cash flow or financial stability of the company as a whole. Government's action is also the reason if a company is believed to monopolize or improperly dominate a particular market.
- l. *Liquidation*. Liquidation is the company's strategy to sell some part or sometimes the whole of tangible asset value rather than as a going concern. Liquidation is usually regarded as the most serious appeal in business strategy. However, as a long-term strategy, liquidation can minimize the loss of the company stakeholders.

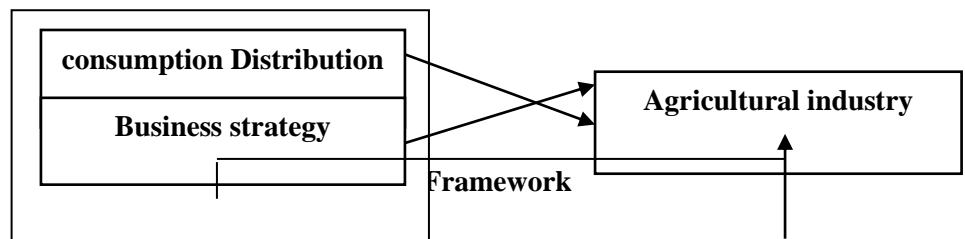
3. Hypothesis

In this study, the authors put forward the hypothesis such as:

- a. There is a partial influence of consumption distribution on the improvement of agricultural industry.
- b. There is a partial influence of business strategy on the improvement of agricultural industry.
- c. There is a simultaneous influence of consumption distribution and business strategies on the increase of agricultural industry.

3.1 Framework of thinking

Schematically framework of this research can be seen in Figure 1 below:



4. Research Methodology

The method used in this research is descriptive research. According to Sekaran (2006), a descriptive study was conducted to determine and be able to explain the characteristics of the studied variables in a situation. This research is also a quantitative research. According to Sugiyono (2009), quantitative research see the relationship of variables towards the studied object more as cause and effect (causal), so that in the research there are independent and dependent variables.

The population in this study are all the agricultural industry companies with open company status as a public company (issuer) that are listed in the Indonesia Stock Exchange (IDX) in 2016 which amounted to 14 companies, listed:

- a. Bisi International Tbk (BISI)
- b. Astra Agro Lestari Tbk (AALI)
- c. Austindo Nusantara Jaya (ANJT)
- d. Eagle High Plantations (BWPT)
- e. Dharma Satya Nusantara (DSGN)
- f. Golden Plantation (GOLL)
- g. Gozco Plantation (GZCO)
- h. Jaua Agra Wattie (JAWA)
- i. PP London Sumatra Indonesia (LSIP)
- j. Multi Agro Gemilang Plantation (MAGP)
- k. Provident Agro (PALM)
- l. Central Proteinaprima (CPRO)
- m. Dharma Samudera Fishing Industries (DSFI)
- n. IntiAgri Resources (IIKP)

The sample of this research is the entire population, so the total sample of 14 respondents. Data collection techniques used in this study is done through saturated sampling techniques. Sugiyono (2009) states saturated sampling is a sampling technique when all members of the population used as a sample.

Variables used in this research consist of several independent variables and the dependent variable. The independent variables include consumption distribution (X_1) and business strategy (X_2). The dependent variable is the agricultural industry (Y). The operational definition of each variable can be shown in Table 2 as follows:

Table 2. Operational Variable Definition

| No. | variables | dimension | Data source |
|-----|------------------------------------|---|----------------|
| 1. | Consumption Distribution (X_1) | <ol style="list-style-type: none">a. The level of income and wealthb. The interest rates and speculationc. frugalityd. Culture, lifestyle and demonstration effecte. The state of the economy | questionnaires |

| | | | |
|----|-----------------------------|---|----------------|
| 2. | Business Strategy (X_2) | a. Growth concentration b. market development c. product development d. Innovation e. Horizontal integration f. Vertical integration g. Joint ventures h. Concentric diversification i. Conglomerate diversification j. Retrenchment/turnaround k. <i>Divesture</i> l. Liquidation | questionnaires |
| 3. | Agricultural industry (Y) | a. Labor b. Capital c. Raw material d. Technology | questionnaires |

Data collection techniques obtained through:

- Secondary data, which obtained through library research, the report data from research objects and others deemed necessary.
- Primary data, research data conducted directly into the field by distributing questionnaires; providing a sheet of questions/statements lists, that are relevant to the necessary data, directly to each respondent that has been set on the consumption distribution, business strategy and the agricultural industry.

Data were analyzed using multiple linear regression analysis with Ordinary Least Square (OLS) method. The model of this research is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

Information:

- Y = Agricultural industry
 X_1 = Consumption Distribution
 X_2 = Business Strategy
 $\beta_0, \beta_1, \beta_2$ = Regression Coefficients
 ϵ = Error

Statistical analysis techniques in this research include:

4.1 Validity and Reliability Test

- Validity test.** According to Nugroho (2005) this test is used to determine the feasibility of the items in question list (construct) defining a variable. A statement said to be valid if the r-count value, which is the value of Corrected Item-Total Correlation, larger than r-critical. Based on Sugiyono (2009), r-critical of validity test is 0.300.
- Reliability test.** Reliability according to Nugroho (2005) is a measure of respondents' stability and consistency in answering matters related to constructs

statements, which are the variable dimension, and arranged into a questionnaire. The reliability of a construct variable is said to be good if it has r-alpha (Cronbach's Alpha) value greater than the r-critical. Nugroho (2005) states r-critical for reliability test is 0.600.

4.2 Regression Analysis Requirements Test

Assumptions test of regression analysis requirements include:

- a. *Normality test.* Normality test aims to test whether in the regression model, confounding variables or residual have a normal distribution. In this study, the test for normality using the Kolmogorov-Smirnov test. According to Santoso (2012: p. 189), if the significance or probability value < 0.05 then the distribution is not normal. Meanwhile, if the value of the significance or probability > 0.05 , the distribution is normal.
- b. *Multicollinearity test.* On Ghozali (2009), multicollinearity test aims to test whether in the regression model found a high or perfect correlation between the independent variables. Wahana Komputer (2005) mentions multicollinearity test known from the VIF and tolerance value of each predictor. Requirement to be considered free from multicollinearity is that if predictor's VIF value does not exceed 10 and Tolerance value > 0.1 .
- c. *Heteroskedasticity test.* According to Pratisto (2004), heteroskedasticity occurs due to changes in the situation which is not represented in the regression model specification which resulted in a change of data accuracy. To detect heteroskedasticity symptoms is by seeing the pattern of the scatter diagram. If the scatter diagram forms certain regular patterns, then regression impaired by heteroskedasticity. But if the scatter diagram does not form a pattern or scattered randomly, the regression is not impaired by heteroskedasticity.

4.3 Correlation Coefficient Test and Determination

Correlation test aims to measure the strength of linear association (correlation) between two variables (Ghozali, 2009). While the coefficient of determination (R^2) aims to measure how far the model able to explain variations in the dependent variable.

4.4 Hypothesis Test

- a. *F-Test.* Kuncoro (2004) states the statistical F-test basically indicates whether all the independent variables included in the model have simultaneous influence on the dependent variable. If the F-count $>$ F-table significantly below 0.05, then partially or individually the independent variables related to the dependent variable significantly, and vice versa.
- b. *T-Test.* The t-test according to Nachrowi and Usman (2002) is a test that aims to determine whether the regression coefficient is significant or not. If t-count $>$ t-table significantly below 0.05, then partially independent variables significantly related to the dependent variable, and vice versa.

4.5 Feasibility Model Test

Testing the feasibility of a model is measured as follows (Wirasasmita, 2008):

- Theoretical plausibility.* Is the direction of influence in the hypothesis test result in accordance with the basis thinking?
- Accuracy of the estimates of the parameters.* Are the parameter hypothesis estimators accurate (no bias) and significant, characterized by fulfillment of required analysis assumption and statistical error probability models (p-value) is smaller than the significance level $\alpha = 0.05$?
- Explanatory ability.* Does the research model have the ability to explain the relationship between economic phenomena, characterized by a low standard error of estimations (less than $\frac{1}{2}$ times the estimator value)?
- Forecasting ability.* Does the research model have the ability to predict the behavior of causal variables (response), characterized by a high determination coefficient worth more than 50% (Baye size)?

5. Analysis

Data summary of Consumption Distribution (X_1), Business Strategy (X_2) and Agricultural Industry (Y) statistically shown in Table 3:

Table 3. Descriptive Statistics Data Research

| | N | Minimum | maximum | mean | Std. deviation |
|--------------------|----|---------|---------|---------|----------------|
| X_1 | 14 | 29.00 | 54.00 | 47.5000 | 6.81345 |
| X_2 | 14 | 29.00 | 58.00 | 49.2857 | 7.56946 |
| Y | 14 | 29.00 | 56,00 | 50.5000 | 6.81345 |
| Valid N (listwise) | 14 | | | | |

Source: SPSS Version 21.00 (2017).

Based on the Table 3 above, descriptive statistics of data can be explained as follows:

a. Consumption Distribution Variable (X_1)

Minimum value of consumption distribution (X_1) is 29.00, while the maximum value of consumption distribution (X_1) is 54.00. The average value of consumption distribution (X_1) is 47.5000, while the standard deviation value is 6.81345.

b. Business Strategy Variable (X_2)

Minimum value of Business Strategy (X_2) is 29.00, while maximum value of Business Strategy (X_2) is 58.00. The average value of Business Strategy (X_2) is 49.2857, while the standard deviation value is 7.56946.

c. Agricultural Industrial Variable (Y)

Minimum value of Agricultural Industries (Y) is 29.00, while the maximum value of Agricultural Industry (Y) is 56.00. The average value of Agricultural Industry (Y) is 50.5000, while the standard deviation value (Y) is 6.81345.

Validity test results of this study shown in Table 4 below:

Table 4. *Validity Test Results*

| Statement Item No. Questionnaire | r-count | | | r-critical | Conclusion |
|--|--|---|------------------------------|------------|------------|
| | Consumption Distribution (X ₁) | Business strategy (X ₂) | Agricultural industry (Y) | | |
| Grain-1 | 0.664 | 0.499 | 0.712 | 0.300 | valid |
| Item 2 | 0.378 | 0.616 | 0.754 | 0.300 | valid |
| Item 3 | 0.537 | 0.823 | 0.376 | 0.300 | valid |
| Item 4 | 0.763 | 0.749 | 0.897 | 0.300 | valid |
| Item-5 | 0.408 | 0.586 | 0.467 | 0.300 | valid |
| Item-6 | 0.660 | 0.729 | 0.734 | 0.300 | valid |
| Item-7 | 0.718 | 0.492 | 0.662 | 0.300 | valid |
| Item-8 | 0.607 | 0.438 | 0.306 | 0.300 | valid |
| Item 9 | 0.695 | 0.449 | 0.714 | 0.300 | valid |
| Item-10 | 0.635 | 0.728 | 0.567 | 0.300 | valid |
| Item-11 | 0.811 | 0.840 | 0.329 | 0.300 | valid |
| Item-12 | 0.579 | 0.704 | 0.329 | 0.300 | valid |

Source: Data Processing (2017).

Based on Table 4, it can be explained that the r-count of the whole distribution consumption (X₁), business strategy (X₂) and agricultural industry (Y) point statements are greater than the r-critical (0.300). Thus, it can be concluded that all the instrument points of variables; Distribution Consumption (X₁), Business Strategy (X₂) and the Agricultural Industry (Y), are valid.

Reliability test results of this study shown in Table 5 below:

Table 5. *Reliability Test Result*

| variables | r-alpha | r-critical | Conclusion |
|--|---------|------------|------------|
| Consumption Distribution (X ₁) | 0.893 | 0.600 | reliable |
| Business Strategy (X ₂) | 0.907 | 0.600 | reliable |
| Agricultural industry (Y) | 0.883 | 0.600 | reliable |

Source: Data Processing (2017).

Table 5 above shows that r-alpha of distribution consumption (X₁), business strategy (X₂) and agricultural industry (Y) variables is greater than the r-critical which is 0.600. Thus, it can be concluded that all the instrument points of the distribution consumption (X₁), business strategy (X₂) and agricultural industry (Y) variable statements are reliable.

The result of regression analysis requirements tests in this study using classic assumption (BLUE) detailed as follows:

a. Normality Test

Normality test results seen in Table 6 as follows:

Table 6. Normality Test Results One-Sample Kolmogorov-Smirnov Test

| | | X ₁ | X ₂ | Y |
|-----------------------------------|----------------|----------------|----------------|---------|
| N | | 14 | 14 | 14 |
| Normal Parameters ^{a, b} | mean | 47.5000 | 49.2857 | 50.5000 |
| | Std. deviation | 6.81345 | 7.56946 | 6.81345 |
| | Absolute | .199 | .180 | .328 |
| Most Extreme Differences | positive | .170 | .125 | .210 |
| | negative | -.199 | -.180 | -.328 |
| Kolmogorov-Smirnov Z | | .743 | .675 | 1.227 |
| Asymp. Sig. (2-tailed) | | .639 | .752 | .099 |

a. Test distribution is Normal.

b. Calculated from data.

Source: SPSS Version 21.00 (2017).

Table 6 above shows that the value of Asymptotic Significance Kolmogorov-Smirnov for consumption distribution (X₁) is 0,639, the value of Asymp. Sig. Kolmogorov-Smirnov for business strategy (X₂) is 0, 752, and the value of Asymp. Sig. Kolmogorov-Smirnov for agricultural industry (Y) is equal to 0,099. This means the Asymptotic Significance values of the entire variables are greater than 0.05, then the regression model meets the normality assumption.

b. Multicollinearity Test

Multicollinearity test results can be seen in Table 7 as follows:

Table 7. Multicollinearity Test Result

| Model | | Collinearity Statistics | |
|-------|----------------|-------------------------|-------|
| | | tolerance | VIF |
| 1 | (Constant) | | |
| | X ₁ | .692 | 1.445 |
| | X ₂ | .692 | 1.445 |

Source: SPSS Version 21.00 (2017).

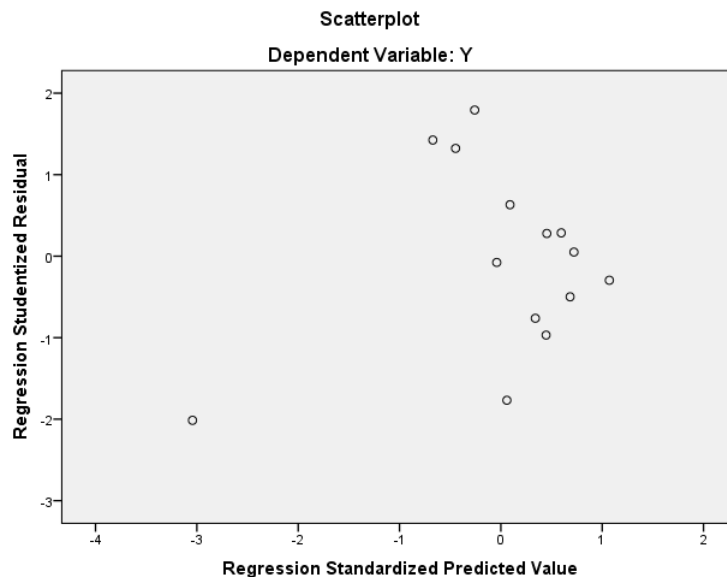
From Table 7 above, it can be seen that the test results of multicollinearity expressed by VIF for the predictor or independent variable of consumption distribution (X₁) and business strategy (X₂) is 1.445 with Tolerance of 0.692. This means that the two independent variables have VIF values smaller than 10 with tolerance value greater

than 0.1. Thus, the regression model used is not impaired with multicollinearity or regression model meet the assumption of multicollinearity.

c. *Heteroskedasticity test*

The test results of heteroskedasticity shown in Figure 2. This picture indicates that the images scatter diagram below forms a random pattern so that it can be concluded the equation is not impaired with heteroskedasticity and suitable for use in this research or the regression model meet the assumption of heteroscedasticity.

Figure 2. *Heteroskedasticity Test Results*



Source: SPSS Version 21.00 (2017).

The test results of simple correlation coefficients (bivariate) with Pearson models shown in Table 8 as follows:

Table 8. *Simple Correlation Coefficient (bivariate)Test Result correlations*

| | | X ₁ | X ₂ | Y |
|----------------|---------------------|----------------|----------------|--------|
| X ₁ | Pearson Correlation | 1 | .555* | .737** |
| | Sig. (2-tailed) | | .039 | .003 |
| | N | 14 | 14 | 14 |
| X ₂ | Pearson Correlation | .555* | 1 | .813** |
| | Sig. (2-tailed) | .039 | | .000 |
| | N | 14 | 14 | 14 |

| | | | | |
|---|---------------------|--------|--------|----|
| Y | Pearson Correlation | .737** | .813** | 1 |
| | Sig. (2-tailed) | .003 | .000 | |
| | N | 14 | 14 | 14 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Version 21.00 (2017).

The above table explained that the effect of consumption distribution (X_1) to the agricultural industry (Y) is strong with $r_{yx1} = 0.737$. That is the better the consumption distribution, the more improvement in the agricultural industry. Similarly, the influence of business strategy (X_2) on the agricultural industry (Y) is very strong with $r_{yx2} = 0.813$. Shows that better business strategy result in more agriculture industry improvement. For the multiple correlation coefficients and coefficients of determination, the result can be identified by number in Table 9 below:

Table 9. Multiple Correlation and Coefficient of Determination Test Result
Model Summary b

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1 | .882a | .779 | .738 | 3.48569 |

a. Predictors: (Constant), X2, X1

b. Dependent Variable: Y

Source: SPSS Version 21.00 (2017).

Based on table 9, the effect of consumption distribution (X_1) and business strategy (X_2) simultaneously on the agricultural industry (Y) is very strong with $R_{yx12} = 0.882$. Meaning, better consumption distribution and business strategy will improve the agricultural industry. While the percentage of consumption distribution (X_1) and business strategy (X_2) simultaneous effect onto the Agricultural Industry (Y) is 77.9% (R Square = 0.779). This means that 77.9% of the agricultural industry improvement is affected by consumption distribution and business strategy. The rest of 100% - 77.9% = 22.1% influenced by other factors such as competitors, economic and political conditions and so forth. F test results are shown in Table 10 as follows:

Table 10. F-Test results

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|----|-------------|--------|-------|
| Model | | Sum of Squares | df | mean Square | F | Sig. |
| 1 | Regression | 469.850 | 2 | 234.925 | 19.335 | .000b |
| | residual | 133.650 | 11 | 12.150 | | |

| | | | | | |
|-------|---------|----|--|--|--|
| Total | 603.500 | 13 | | | |
|-------|---------|----|--|--|--|

a. Dependent Variable: Y

b. Predictors: (Constant), X2, X1

Source: SPSS Version 21.00 (2017).

Table 10 shows F-count results amounted to 19.335. While the F-table value ($n = 6$, numerator $df = k - 1 = 3 - 1 = 2$, and the denominator $df = n - k = 14 - 3 = 11$) at the 95.0% according to reference is $= 3.98$. So that $F\text{-count} > F\text{-table}$ ($19.335 > 3.98$). Viewing from the probability or significant values (sig.) of 0,000, then $\text{sig.} < \text{Significance level of } 0.05$ ($0.000 < 0.05$). This means that the effect of consumption distribution and business strategies simultaneously to the agricultural industry is significant.

While the t test results are shown in Table 11 as follows:

Table 11. T-test Results

| Coefficients ^a | | | | | |
|---------------------------|-----------------------------|------------|---------------------------|-------|------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | beta | | |
| 1 (Constant) | 4.998 | 7.465 | | .670 | .517 |
| X ₁ | .413 | .171 | .413 | 2.419 | .034 |
| X ₂ | .526 | .154 | .584 | 3.424 | .006 |

a. Dependent Variable: Y

Source: SPSS Version 21.00 (2017).

T-test result in Table 11 can be explained as follows:

a. Consumption Distribution Variable (X_1)

Based on the results obtained by t-test, the t-count value is 2.419 with t-table (for $n - k = 14 - 3 = 11$) values of 2.201, so that $t\text{-count} > t\text{ table}$ or $2.419 > 2.201$. Looking at the probability or significant values (sig.) that amounted to 0.034, then the sig. smaller than Significance level of 0.05, which is $0.034 < 0.05$. This means that the partial effect of consumption distribution on the agricultural industry is significant.

b. Business Strategy Variable (X_2)

Based on the results obtained by t-test, the t-count value is 3.424 with t-table (for $n - k = 14 - 3 = 11$) values of 2.201, so that $t\text{-count} > t\text{ table}$ or $3.424 > 2.201$. As for the probability or significant values (sig.) amounted 0.006, then the value of sig. $< \text{significance level}$ ($0.006 < 0.05$). Meaning, the partial influence of business strategy to the agricultural industry is significant.

From the Table 10 above also obtained multiple linear regression equation as follows:

$$Y = 4.998 + 0.413X_1 + 0.526X_2$$

The multiple linear regression equation can be explained as follows:

- Constant value = 4,998 meaning that if the value of consumption distribution (X_1) and business strategy (X_2) variables is 0, then the agricultural industry as big as 4.998
- Coefficient regression of consumption distribution variable (X_1) = 0.413, Meaning that when consumption distribution (X_1) is increased by 1 (one) with the assumption that the value of business strategy variable (X_2) is constant, it will increase the agricultural industry by 0.413
- Coefficient regression of business strategies variable (X_2) = 0.526, Meaning that if the business strategy (X_2) increased by 1 (one) with the assumption that the value of consumption distribution variable (X_1) is constant, it will increase the agricultural industry by 0.526

The results of the feasibility test in this research include:

- Theoretical plausibility.* The research model produces test results and the majority direction of influence in accordance with the expectations and structural change theory which is the basis of the idea. Theoretical plausibility is presented in Table 11 below:

Table 11. *Theoretical Plausibility Test Result*

| No. | Relationship between Variables | Pre-Estimation | Post-Estimation | conformity |
|-----|--|----------------|-----------------|---------------|
| 1. | Influence of Consumption Distribution (X_1) on the Agricultural Industry (Y) | + | + | Corresponding |
| 2. | Influence of Business Strategy (X_2) on the Agricultural Industry (Y) | + | + | Corresponding |

Source: Data Processing (2017)

- Accuracy of the estimates of the parameters.* The research model has an accurate regression coefficient estimator which unbiased and significant. Analysis assumptions are met and the probability of statistical error within the model is very low, with p-value of consumption distribution (X_1) = 0.034 and business strategy (X_2) = 0.006. Thus, all the variables have a p-value less than $\alpha = 0.05$.
- Explanatory ability.* The research model has a high ability to explain the relationship between the studied economic phenomena. Standard Error (SE) of significant regression coefficient is worth less than $\frac{1}{2}$ times its absolute b value ($SE < \frac{1}{2} | b |$). Explanatory plausibility can be presented in Table 12 as follows:

Table 12. *Explanatory Ability Test Result*

| No. | Relationship between Variables | Regressi on Coefficients | Standard Error (SE) | Decision |
|-----|--|--------------------------|---------------------|---|
| 1. | Influence of Consumption Distribution (X_1) on the Agricultural Industry (Y) | 0.413 | 0.171 | $(SE < \frac{1}{2} b)$ $(0.171 < 0.207)$ |
| 2. | Influence of Business Strategy (X_2) on the Agricultural Industry (Y) | 0,526 | 0,154 | $(SE < \frac{1}{2} b)$ $(0,154 < 0.263)$ |

Source: *Data Processing (2017).*

- d. *Forecasting ability.* The model has a high enough prediction capabilities level for the behavior of response variable (variable effect) as shown by the determination coefficient value of consumption distribution (X_1) and business strategy (X_2) on the agricultural industry (Y) that exceeds 50% ($R^2 = 77.9\%$).

6. Conclusion

Based on the analysis and discussion so that the conclusions of this research are as follows:

- The influence of consumption distribution partially on the improvement of agricultural industry is significant.
- The influence of business strategy partially on the improvement of the agricultural industry is significant.
- The influence of consumption distribution and business strategy simultaneously on the improvement of the agricultural industry is significant.

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